

#### Manufacturer:

ADA Solutions, a Division of SureWerx USA Inc.

323 Andover Street, Suite 3 Wilmington, MA 01887 Phone: 800-372-0519 Fax: 978-262-9125 Web: adatile.com





**Description:** Cast-In-Place Replaceable Detectable Warning Surface Panels (CIP REP) with an in-line truncated dome pattern embedded in concrete at pedestrian crossings, boarding platforms, and rail crossing locations.

**Compliance:** CIP REP Panels are compliant with the following guidelines and requirements:

- American Barriers Act (ABA) Accessibility Standards
- ADA Accessibility Guidelines (ADAAG)
- Department of Transportation ADA Standards for Transportation Facilities (2006)
- Department of Justice ADA Standards (2010)
- Public Rights-of-Way Accessibility Guidelines (PROWAG)
- California Building Standards Code, Title 24, California Code of Regulations
- Texas Accessibility Standards (TAS) 2012
- AASHTO M 333 Standard Specification for Detectable Warning Surfaces
- International Code Council (ICC) A117.1
   Accessible and Usable Buildings and Facilities

**Material:** CIP REP Panels are manufactured using a matte finish exterior grade homogeneous (uniform color throughout thickness of product) glass and carbon reinforced polyester-based sheet molding compound (SMC) composite material.

**Warranty:** Guaranteed in writing for a period of seven (7) years from date of Contract's final completion. The guarantee includes manufacturing defects, breakage, and deformation.

### **PRODUCT DATA SHEET:**

SECTION 32 17 26 – TACTILE WARNING SURFACING DETECTABLE WARNING SURFACE PANELS CAST-IN-PLACE REPLACEABLE

#### Panel Sizes:

24" x 24" (609.6 x 609.6 mm) 24" x 36" (609.6 x 914.4 mm) 24" x 48" (609.6 x 1219.2 mm) 24" x 60" (609.6 x 1524.0 mm) 36" x 48" (914.4 x 1219.2 mm) 36" x 60" (914.4 x 1524.0 mm)

#### **Radius Panels**

24" x 33.25" (609.6 x 844.5 mm)
\*Radius options between 6 ft (1.82 m) and 21 ft (6.40 m)

**Colors:** Color shall be single, homogeneous color throughout panel

- Federal Yellow FS No. 33538
- Brick Red FS No. 20109
- Clav Red FS No. 22144
- Safety Red FS No. 31350
- Black FS No. 37038
- Dark Gray FS No. 36118
- Safety Blue FS No. 15187
- White FS No 27925
- Seattle Yellow FS No 23594

**Domes:** Raised truncated domes of 0.2" (5.0 mm) nominal height, base diameter of 0.9" (22.8 mm) and top diameter of 0.45" (11.4 mm).

**Dome Spacing:** Standard rectangular panels have 2.35" (59.6 mm) or 2.4" (60.9 mm) dome spacing in square grid pattern. Radius panels have 1.67" to 2.4" (40.6-60.9 mm) dome spacing in radial pattern. ADA Standards and Public Rights-of-Way Accessibility Guidelines require truncated dome spacing range of 1.6"-2.4" (40.6-60.9 mm).

**Anchoring:** Panels shall feature a minimum of eight (8) corrosion resistant zinc alloy concrete anchor inserts minimum 1.5" (38.1mm) long with 0.5" (12.7 mm) x 1.5" (38.1 mm) long corrosion resistance bolts. Anchor bolt locations are covered with structural water-tight caps.

**Installation:** CIP REP panels are wet set into a minimum 2  $\frac{1}{2}$ " (63.5 mm) depth of concrete (4"-7" slump). Panels are pressed into the wet concrete and tamped or vibrated to ensure that there are no voids or air pockets. Field level of the panel is to be flush to the adjacent concrete surface.



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**Replacement:** CIP REP panels may be replaced by removing the bolts and inserting a new panel it into the existing formed cavity. The original inserts remain in place.

**Cutting:** Cutting and Setting of CIP REP panels shall be cut into size using a 60-tooth carbide blade on a table saw or equivalent cutting device.

## **Product Testing and Physical Properties:**

| Standard                       | Standard Description   | Value   |
|--------------------------------|--|---|
| ASTM D695                      | Compressive Strength   | 28,900 psi minimum  |
| ASTM D790                      | Flexural Strength  | 29,300 psi minimum  |
| ASTM D 638                     | Tensile Strength   | 11,600 psi minimum  |
| ASTM C 1028                    | Standard Test Method for Determining the Static Coefficient of Friction (Slip Resistance)                | 1.18 Dry / 1.05 Wet   |
| AS HB198:2014<br>(AS/NZS 4586) | Pendulum Sustainable Slip Resistance (SSR)   | Pendulum Test Value (PTV),<br>with Four S (96) hard rubber<br>slider: 56 Dry / 44 Wet;              |
|                                |  | After 500 cycles of abrasion: 34 Wet  |
| ASTM C501                      | Abrasion Resistance  | Minimum 500   |
| FM 5-594                       | Abrasion Resistance, Florida Method  | Average Volume Loss: no more than 0.03 cm3  |
| NTPEP TP103<br>(2015)          | High Temperature Thermal Cycling Exposure, (Sect 14) and Resistance to Impact from Falling Tup (Sect 10) | Min. 60 thermal cycles at 200°F (93.33°C) = maximum damage classification of 'C' at 20 ft-lb impact |
| ASTM G155                      | Accelerated Weathering   | ΔE<5.0 at 2,000 hours min.  |
| ASTM D570                      | Water Absorption   | 0.07%   |
| ASTM C1026                     | Freeze/Thaw/Heat   | No deterioration  |
| ASTM D1037                     | Freeze/Thaw  | No deterioration  |
| ASTM D543                      | Chemical Stain Resistance  | No reaction   |
| ASTM D1308                     | Chemical Stain Resistance  | No reaction   |
| ASTM-B117                      | Salt and Spray   | No change after 200 hours   |
| ASTM E84                       | Flame Spread Index   | 20  |
| AASHTO H20                     | Load Bearing Test  | No Damage at 16,000 lbs.  |